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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N4901B

Agilent Keysight N4901B Serial BERT 13.5 Gb/s The Agilent N4901B Serial BERT operates from 150 Mb/s to 13.5 Gb/s with true differential I/O, built-in CDR, and a measurement suite including bathtub, Q-factor, and spectral jitter decomposition. OEM N4901B specification summaries list less than 1 ps rms typical intrinsic jitter, less than 25 ps 10-90 percent transition time, less than 50 mV input sensitivity, and 200 ps jitter modulation from DC to 1 GHz. 10 Gb/s-class SERDES, XFP/SFP+, and optical-transceiver BER and jitter analysis in R&D. The Agilent N4901B Serial BERT operates from 150 Mb/s to 13.5 Gb/s with true differential I/O, built-in CDR, and a measurement suite including bathtub, Q-factor, and spectral jitter decomposition. OEM N4901B specification summaries list less than 1 ps rms typical intrinsic jitter, less than 25 ps 10-90 percent transition time, less than 50 mV input sensitivity, and 200 ps jitter modulation from DC to 1 GHz. 10 Gb/s-class SERDES, XFP/SFP+, and optical-transceiver BER and jitter analysis in R&D. 150 Mb/s to 13.5 Gb/s with 7 Gb/s start and upgrade path



MODEL

**Agilent / Keysight
N4901B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N4901B

LISTING

<https://aumictechlabs.com/products/n4901b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight N4901B is a serial Bit Error Rate Tester (BERT) for validation and characterization of high-speed digital interfaces. It generates and analyzes serial data streams to measure bit error rates with precision, supporting extensive PRBS pattern libraries (PRBS7, PRBS15, PRBS23, PRBS31) and user-defined patterns. The instrument detects single-bit and multi-

bit errors with high-resolution counting and provides jitter generation across multiple types - random, deterministic, sinusoidal, and aliased - to stress-test receiver tolerance. Advanced clock recovery locks onto incoming data with varying jitter content, while configurable output amplitude and rise/fall times simulate diverse signal conditions. Built for both R&D and manufacturing, the N4901B delivers signal integrity analysis including eye diagrams, rise/fall time measurements, and amplitude characterization. Its variable input sensitivity and quantifiable jitter tolerance masks support interoperability testing across communication systems and standards-compliant validation workflows.

N4901B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Serial bit error ratio tester
Series Family	Agilent N4900 Serial BERT
Data Rate Range	150 Mb/s to 13.5 Gb/s
Pattern Depth	1 bit to 33,554,432 bits
Intrinsic Jitter Typical	less than 1 ps rms typical
Transition Time 10 To	less than 25 ps
Jitter Modulation	200 ps, DC to 1 GHz
Input Sensitivity	less than 50 mV
Cdr Range	2.11 to 3.20 Gb/s
Differential Io	true differential inputs and outputs
Upgrade Path	start at 7 Gb/s and upgrade to 13.5 Gb/s
Measurement Suite	bathtub curve, output level, Q-factor, spectral jitter decomposition, fast eye mask, error location capture
Remote Interfaces	LAN, USB, and GPIB class of N4900
User Interface	color touch-screen N4900 family
Form Factor	compact serial BERT mainframe
Signal Integrity	unmatched signal integrity stated for 10 Gb/s-domain serial BER
Clock Data Recovery	built-in CDR with expanded loop bandwidth versus N4901A
Pattern Generator	differential pattern generation with variable levels
Error Detector	true differential error analysis
Application Class	semiconductor and communications serial I/O to 13.5 Gb/s
Bandwidth	versus N4901A
Data Rate	Range: 150 Mb/s to 13.5 Gb/s

N4901B Specifications

PARAMETER	VALUE
Agilent Keysight N4901B Serial BERT 13.5 Gb/s	Overview
Applications	10 Gb/s-class SERDES, XFP/SFP+, and optical-transceiver BER and jitter analysis in R&D.
Key Features	150 Mb/s to 13.5 Gb/s with 7 Gb/s start and upgrade path
Technical Specifications	Instrument Type: Serial bit error ratio tester

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Instrument Type	Serial bit error ratio tester
Series Family	Agilent N4900 Serial BERT
Data Rate Range	150 Mb/s to 13.5 Gb/s
Pattern Depth	1 bit to 33,554,432 bits
Intrinsic Jitter Typical	less than 1 ps rms typical
Transition Time 10 To 90	less than 25 ps
Jitter Modulation	200 ps, DC to 1 GHz
Input Sensitivity	less than 50 mV
Cdr Range 1	1.0 to 1.6 Gb/s
Cdr Range 2	2.11 to 3.20 Gb/s
Cdr Range 3	4.23 to 6.40 Gb/s
Cdr Range 4	9.9 to 10.9 Gb/s
Differential Io	true differential inputs and outputs
Upgrade Path	start at 7 Gb/s and upgrade to 13.5 Gb/s
Measurement Suite	bathtub curve, output level, Q-factor, spectral jitter decomposition, fast eye mask, error location capture
Remote Interfaces	LAN, USB, and GPIB class of N4900
User Interface	color touch-screen N4900 family
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Notes	
Numeric rows from Agilent/Keysight N4901B Serial BERT 13.5 Gb/s specification summaries (150 Mb/s-13.5 Gb/s,	

pattern depth, CDR bands, less than 1 ps rms typical, less than 25 ps tr, less than 50 mV, 200 ps DC-1 GHz modulation). Full output-level tables are in the N4901B technical data sheet.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.